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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,501	09/03/2004	Claudia Becker	P08367US00/RFH	2837
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STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			EXAMINER LAFORGIA, CHRISTIAN A	
			ART UNIT 2131	PAPER NUMBER
			MAIL DATE 01/31/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/506,501

Applicant(s)

BECKER ET AL.

Examiner

Christian La Forgia

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007 and 09 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. The amendments of 19 September 2007 and 09 November 2007 have been noted and made of record.
2. Claims 1-14 have been cancelled as per Applicant's request.
3. Claims 15-27 have been presented for examination.

Response to Arguments

4. Applicant's arguments, see page 1, filed 09 November 2007, with respect to the specification have been fully considered and are persuasive. The objection of the specification has been withdrawn.
5. Applicant's arguments, see page 1, filed 09 November 2007, with respect to the claim objections have been fully considered and are persuasive. The objection of the claims 2-14 has been withdrawn.
6. Applicant's arguments, see pages 1 and 2, filed 09 November 2007, with respect to the 35 U.S.C. 101 rejections have been fully considered and are persuasive. The 35 U.S.C. 101 rejections of the claims 1-14 has been withdrawn.
7. Applicant's arguments, see page 2, filed 09 November 2007, with respect to the 35 U.S.C. 112, 2nd paragraph rejections have been fully considered and are persuasive. The 35 U.S.C. 112, 2nd paragraph rejections of the claims 1-14 has been withdrawn.
8. Applicant's arguments filed 09 November 2007 have been fully considered but they are not persuasive.
9. The Applicant argues that the prior art does not teach the ECM messages contain access criteria and the cryptogram of the control word. The Examiner disagrees and contends that these

two components are essential to ECM messages. The Examiner refers to column 7, lines 13-15 of U.S. Patent No. 7,092,729 B1 to Fichet et al., hereinafter Fichet, as evidence. Fichet states that

the control word and the access criteria are used to build an Entitlement Control Message...

Since Candelore discusses ECMs throughout his disclosure, and according to Fichet the ECM is built on the control word and access criteria, the ECMs disclosed in Candelore must contain access criteria and control word; therefore, the rejection is maintained.

10. The Examiner disagrees with the Applicant's arguments that Candelore does not teach assigning each ECM message a number certifying a monotonic non-decreasing function. As noted in the previous office action, as well as again below, the examiner interpreted the number assigned to each ECM message as time related to the ECM, for example in Figures 6B-6D, time X, time X+1,...,time N-1, time N, etc. The Applicants support this interpretation in at least claims 16 and 17 when they claim that the monotonic non-decreasing function is a function of time. Since the Applicants further clarify the monotonic non-decreasing function is a function of time, and Candelore teaches that each ECM is based on a function of time the rejection of assigning each ECM message a number certifying a monotonic non-decreasing function is maintained.

11. Assuming *arguendo* that Candelore's disclosure of including time (the monotonic non-decreasing function) in the ECMs does not teach the argued limitation. The use of ascending monotonic functions for packet sequencing has been known since at least 20 August 1996 as evidenced by the abstract of U.S. Patent No. 5,548,593 to Peschi, hereinafter Peschi. Therefore,

even if Candelore does not teach assigning each ECM message a number certifying a monotonic non-decreasing function, it is clearly not the novel aspect of the claimed invention and would have been obvious to one of ordinary skill in the art to sequence the ECM packets using an monotonic non-decreasing (or ascending) function since Peschi states in the abstract that it makes resequencing the received data easier.

12. The Examiner disagrees with the Applicant's arguments that the selected key does not depend on the sending time of the user request. Candelore teaches resolving a key for old content that was previously requested and selecting a key corresponding to the time period the old content was requested, see for example column 11, lines 50-65 and column 13, lines 1-13. This can be further supported by Candelore's disclosure of managing a customer's entitlement time history (column 11, lines 63-65). Since Candelore teaches that the key depends on the sending time of the user request, the rejection is maintained.

13. See further rejections set forth below.

Claim Rejections - 35 USC § 102

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claims 15-18 and 20-27 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,363,149 to Candelore, hereinafter Candelore.

16. As per claim 15, Candelore teaches a method for controlling access to information scrambled at a broadcast center (column 4, lines 11-15) using a service key contained in a control word (column 4, lines 24-34), the control word being encrypted by means of an operating key (column 2, lines 47-55), said access control method comprising:

sending said scrambled information and periodic entitlement control message (ECM) messages (column 6, lines 29-37), to at least one descrambling terminal associated with an access control module provided with a security processor (column 4, lines 43-51), said ECM messages containing access criteria and the cryptogram of the control word, said control word and the cryptogram of the control word being changed periodically (column 2, lines 47-55), and

at each descrambling terminal comparing said access criteria with at least one access right stored in memory in the access control module (Figures 6A, 6B, 6C, 6D, 6E, 8A [block 830], column 4, lines 24-34);

accessing to said scrambled information at each descrambling terminal being conditional upon a "true" value for said access criteria when compared with at least one access right stored in the access control module (Figures 6A, 6B, 6C, 6D, 6E, 8A [block 830], column 4, lines 24-34), and accessing to said scrambled information comprising decrypting said cryptogram of the control word using the operating key in order to recover said control word and to descramble said scrambled information (column 2, lines 47-55, column 4, lines 24-34), wherein the method further comprises:

a) assigning each to ECM message so that the numbers assigned to consecutive ECM messages form a monotonic non-decreasing function and consecutive ECM messages with successive numbers represent a timebase formed by a plurality of individual time intervals for sending successive individual quanta of scrambled information (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33, i.e. the ECM contains a key that corresponds to a given time period);

b) detecting in each descrambling terminal the number of each ECM message, and then, in response to a user request from a user of said descrambling terminal for conditional controlled access to at least a portion of said scrambled information (column 7, lines 36-47, column 8, lines 13-59);

c) selecting a number of an ECM message, corresponding to the sending time of said request, and constituting a time origin of said timebase (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33); and

d) defining a time range by a first offset from said origin corresponding to the beginning of the time range, and a second offset corresponding to the end of the time range, the defined time range corresponding to a plurality of individual time intervals defining a plurality of successive individual quanta of scrambled information (Figures 6B, 6C, 6D, 8A, 8B, 8C, column 8, lines 13-59, column 10, lines 43-54, column 11, lines 1-33); and

e) communicating to the user authorization to access said scrambled information over the defined time range as a function of a specific access criterion (column 12, lines 31-41, i.e. granting access to the user if they are entitled to access the data contained in that time period).

U.S. Patent No. 6,035,038 to Campinos et al., hereinafter Campinos, discloses encrypting the control word in the entitlement control messages in at least the Abstract, as such encrypting control words is well-known and commonly practice, and the Applicant admits as much.

Column 7, lines 13-14 of U.S. Patent No. 7,092,729 B1 states that “the control word and the access criteria are used to build an Entitlement Control Message,” thereby showing that those two features are inherent in ECMs.

17. Regarding claim 16, Candelore teaches that said monotonic non-decreasing function is a continuously increasing function of the sending time of the ECM messages (Figures 6B, 6C, 6D, 8A, 8B, 8C, column 10, lines 43-54, column 11, lines 1-33, i.e. time X, time X+1...).

18. Regarding claim 17, Candelore teaches said monotonic non-decreasing function is an increasing step function of the sending time of said ECM messages (Figures 6B, 6C, 6D, 8A, 8B, 8C, column 10, lines 43-54, column 11, lines 1-33, i.e. time X, time X+1...).

19. With regards to claim 18, Candelore teaches that each step is defined by a constant number over a plurality of sending times of said ECM messages which defines a timebase with a resolution different from the sending time of said ECM messages (Figure 5A, 5B, column 9, line 34 to column 10, line 28).

20. With regards to claim 20, Candelore teaches that said specific access criterion corresponds to free access (column 1, lines 14-24, column 8, lines 44-46, i.e. HD signal can be received via antenna for free).

21. With regards to claim 21, Candelore teaches that said time range is either an interval backwards from said origin, first offset ≤ 0 AND second offset ≤ 0 , or an interval forwards from said origin, first offset ≥ 0 AND second offset ≥ 0 , or a forward and backward interval, first offset ≤ 0 AND second offset ≥ 0 (Figures 5A, 5B, column 2, lines 47-55, column 9, lines 48-62, column 10, lines 5-28).

22. Regarding claim 22, Candelore teaches managing viewings at the request the user in accordance with said specific access criterion in said time range and outside said time range, said method includes at least:

defining a maximum authorized number of viewings; testing whether the number of viewings is less than or equal to said authorized maximum number of viewings; and, in the event of a negative result of said test, refusing access to the scrambled information (column 2, lines 1-28, i.e. limiting the number of viewings); else

testing whether said current number is in said time range (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33); and,

in the event of said current number being in said time range (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33);

authorizing access to said scrambled information on the basis of the specific access criterion during said time range (column 10, lines 5-43); else

authorizing access on the basis of a distinct access criterion other than specific access criterion (column 10, lines 5-43). Boolean operations used for authorization are well known and commonly practice, and official notice is hereby taken of such.

23. With regards to claim 23, Candelore teaches authorization of forward access to said scrambled information beyond said time range, on the basis of an access criterion other than said specific access criterion (column 2, lines 56-67, column 10, lines 55-67, i.e. recording for later use, future time period); and

authorization of backward access to said scrambled information before said time range, on the basis of an access criterion other than said specific access criterion (column 10, lines 55-67, i.e. past time period). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

24. With regards to claim 24, Candelore teaches that, if said current number is not in said time range, said authorization of access based on an access criterion other than said specific access criterion:

submitting said current number and said first Boolean variable to a first logical test to verify whether said current number is equal to or greater than said origin number and to authorize forward access to said scrambled information (column 10, lines 43-54, column 11, lines 1-33) or

to a second logical test to verify whether said current number is equal to or the less than said origin number and to authorize backward access to said scrambled information (column 10, lines 43-54, column 11, lines 1-33) and, in the event of a positive result of either of the first or second logical tests:

authorizing forward access, or backward access as appropriate to said scrambled information with no incrementing of the number of viewings (column 10, lines 55-67) and, in the event of a negative result of both the first and second logical tests:

testing whether said number of viewings is less than the authorized maximum number of viewings; and in the event of a negative result of said test, in refusing access to the scrambled information and incrementing said number of viewings by 1 (column 2, lines 1-28), else

authorizing forward or backward access, as appropriate, to said scrambled information (column 10, lines 55-67). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

25. Concerning claim 25, Candelore teaches that for a specific access control corresponding to a basic rewind service for a recording and an authorized maximum number of viewings = 1 (column 2, lines 1-28), said time range is a backward range defined by first offset < 0 AND second offset = 0 (column 10, lines 43-54, column 11, lines 1-33), forward access being authorized, backward access not being authorized (column 10, lines 55-67). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

26. Concerning claim 26, Candelore teaches that for a specific access control corresponding to a free access preview service, said time range is a forward range defined by first offset = 0 AND second offset > 0 (column 10, lines 43-54, column 11, lines 1-33), the authorized maximum number of viewings is = 1 (column 2, lines 1-28), recording and/or backward access not being authorized (column 2, lines 56-67). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

27. Concerning claim 14, Candelore teaches that for looped transmission of scrambled information, said authorized maximum number of viewings is set a particular value (column 2, lines 1-28), said time range for access to the scrambled information has a specific value (column

10, lines 43-54, column 11, lines 1-33). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

Claim Rejections - 35 USC § 103

28. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

29. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Candelore in view of U.S. Patent Application Publication No. 2002/0076050 to Chen et al., hereinafter Chen.

30. Concerning claim 19, Candelore does not teach that each number is defined by a timestamp, each step being defined by the time range represented by two separate timestamps.

31. Chen teaches that each number is defined by a timestamp, each step being defined by the time range represented by two separate timestamps (Figure 4 [blocks 408, 412], paragraph [0080]-[0086]).

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to define the time range by two separate timestamps, since Chen states at paragraph [0078] that the use of timestamps allows the legal owner to trace the last legal session when the current session has been compromised.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

34. The following patents are cited to further show the state of the art with respect to entitlement control messages, such as:

United States Patent Application Publication No. 2002/0087971 A1 to Cochran et al., which is cited to show a video on demand system that uses entitlement control messages to allow users to access content.

United States Patent No. 7,080,397 B2 to Cochran et al., which is cited to show a video on demand system that uses entitlement control messages to allow users to access content.

United States Patent No. 6,978,022 to Okimoto, which is cited to show a video on demand system that uses entitlement control messages to allow users to access content.

35. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

36. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (571) 272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.


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38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christian LaForgia
Patent Examiner
Art Unit 2131

A handwritten signature in black ink, appearing to read 'C. LaForgia', with a stylized flourish at the end.

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